

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-012600**Date Inspected:** 11-Mar-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 1900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See Below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG and Tower**Summary of Items Observed:**

CWI Inspectors: Mr. Du Zhi Qun, Mr. An Qing Xiang, Mr. Lv Li Qing and Mr. Li Yang

On this date CALTRANS OSM Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. This QA Inspector observed the following:

Tower Bay 10

This QA Inspector observed ZPMC welder Mr. Zhu Cheng Dong, stencil 040582 is using shielded metal welding process WPS-345-SMAW-2G(2F)-Repair to make groove weld repair weld NSTL4-3B/L-2A between north tower lift 4 skin plate D to skin plate E corner weld in accordance with weld repair document TWR3068. This QA Inspector observed QC Inspector Mr. Wang Hao is on the work platform near where this welding is taking place. A review of the weld repair document revealed that the document states: "QC shall inspect the weld passes more closely". This QA Inspector did not observe QC Inspector Mr. Wang Hao visually inspecting any of the weld passes that Mr. Zhu Cheng Dong had deposited. This QA Inspector showed QC Inspector Mr. Wang Hao the statement that indicates that QC should be inspecting the weld passes and this QA Inspector asked QC Inspector Mr. Wang Hao if he had a flashlight to use during visual inspections of this weld repair and Mr. Wang Hao did not appear to have any light or other means of illuminating this weld repair, other than normal shop lighting. This weld repair is being performed in accordance with Caltrans approved weld repair document TWR3068. This QA Inspector informed ZPMC CWI Mr. Du Zhi Qun that the welding repair document requires QC to perform close

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monitoring of the welding and that Mr. Wang Hao did not appear to have any light for him to use in order to verify all the weld slag had been cleaned prior to making additional weld passes. ZPMC CWI Mr. Du Zhi Qun informed this QA Inspector that Mr. Wang Hao will get a flashlight and monitor the weld cleaning more closely. This QA Inspector measured a welding current of approximately 180 amps and Mr. Zhu Cheng Dong appears to be certified to make this weld. This QA Inspector observed Mr. Wang Hao is monitoring the base material temperature and the shielded metal arc welding electrodes are being stored in an electrically heated electrode storage container which is warm to the touch. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Ms. Hua Gui Mei, stencil 050295 is using submerged arc welding procedure specification WPS-B-T-3221-B-U2b-S to make groove weld SSD1-TL5-1B-F-11B between South tower skin plate B and skin plate C. This QA Inspector observed ZPMC Quality Control CWI Mr. Du Zhi Qun monitoring this welding and this QA Inspector measured a welding current of approximately 625 amps and 31 volts. This QA Inspector observed ZPMC had preheated the base material using electric heating elements and Mr. Du Zhi Qun is monitoring the base material temperatures. ZPMC welder Ms. Hua Gui Mei appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents. See the photograph below for additional information.

Tower Bay 11

This QA Inspector observed ZPMC welder Mr. Zhong Cheng, stencil 041271 is using welding procedure specification WPS-345-SMAW-2G(2F)-Repair to make shielded metal arc weld WSTL4-3B/L-58B repair #6 between West tower lift 4 skin plate A and skin plate E inside surfaces. This weld repair is being performed in accordance with Caltrans approved weld repair document TCWR569 Revision 4. This QA Inspector observed that the base material is being heated with an electric heater and ZPMC QC personnel are monitoring the base material temperatures. This QA Inspector observed a welding current of approximately 235 amps and the welding electrodes are being stored in a heated container. This QA Inspector observed Mr. Zhong Cheng appears to be certified to make this weld. Items observed by this QA Inspector appear to be progressing in compliance with project specifications. See the photograph below for additional information.

OBG Bay 14

This QA Inspector observed ZPMC welder Mr. Jiang Shi Zhen, stencil 048694 has recently used the shielded metal arc welding process to tack weld various floor beams, longitudinal diaphragms and other components together near panel point 114 OBG segments 12CW. This QA Inspector observed Mr. Jiang Shi Zhen appears to be certified to make these welds. This QA Inspector did not observe this welder performing any welding. Items observed on this date appeared to generally comply with applicable contract documents.

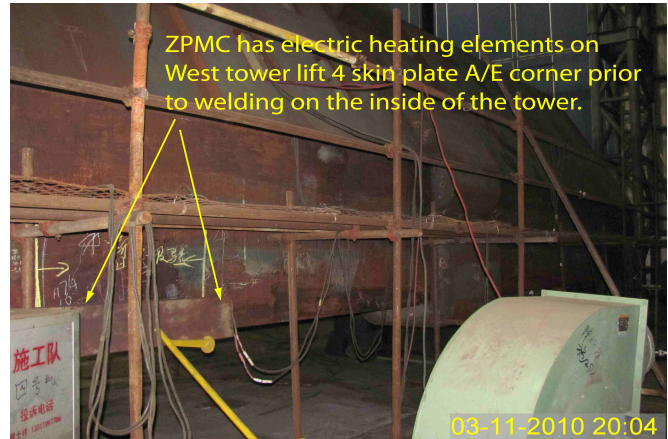
This QA Inspector observed ZPMC welder Ms. Wang Min, stencil 044771 has recently completed using welding process to make submerged arc groove weld SEG3002*-002 between OBG segment 12BE deck plate DP3013A and deck plate DP3014A. This QA Inspector confirmed that Ms. Wang Min appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

Segment Trial Assembly

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This QA Inspector observed ZPMC welder Mr. Dai Lu, stencil 048659 is using shielded metal arc procedure WPS-345-SMAW-3G(3F)-Repair to make repair welds to various stiffener hold back welds on OBG segment 6CW counterweight side plate at the end of the OBG adjacent to where OBG segment 7AW will be attached. This QA Inspector observed the welding electrodes are being stored in a portable rod oven which is connected to an electric power cable. This QA Inspector observed one person with a torch appears to be preheating the base materials prior to commencement of welding. This QA Inspector measured a welding current of approximately 160 amps and Mr. Dai Lu appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents



Summary of Conversations:

See Above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang phone: 150-0042-2372 , who represents the Office of Structural Materials for your project.

Inspected By:	Dawson,Paul	Quality Assurance Inspector
Reviewed By:	Carreon,Albert	QA Reviewer
